

~~Officially~~
~~Confidential~~

Comments on "Proposals on Chemical Catalysis for U.S.-Soviet Exchange Program"

1. The subject exchanges run the gamut from extremely basic to ^{and} applied and somewhat empirical approach. Although the Soviet activity in catalytic theory is predictable and improving, their industrial exploitation of catalysts in general and petroleum processing catalysts in particular leaves much to be desired.

2. Proposal I, "Catalysis by Coordination Compounds," is a field which is fairly active in both countries. The Soviet work on fixation of atmospheric nitrogen and carbon dioxide and reactions with saturated hydrocarbons could be of considerable economic importance. The degree of interest

in this exchange is probably significant by both parties. This is one of the two areas within the framework of the proposed exchanges where the US can possibly gain technologically.

3. Proposal II, Relationship Between Homogeneous and Heterogeneous Catalysis. This exchange would probably be of mutual benefit to both the US and USSR. However, it is not felt that there would result ~~in~~ "substantial practical benefits" as cited in the proposal. This exchange would allow both US and USSR to systematically develop of more efficient catalysts ~~with~~

4. Proposal III - Characterization of Catalytic materials by ~~chemical & physical~~ New Instrumental Methods. This exchange would be of great interest to the Soviets and would expose to them the latest US electronic components, design and packaging. This would entail some security risk. The scope of this exchange would be incorporated to some degree in Proposals I and II. As for the broadening of the use of the new instruments by the US, this is a completely independent consideration and the exchange is not a proper mechanism to accomplish this.

5. Proposal IV - Characterization of Catalytic materials by Chemical & Physical Methods. This basic survey would be of considerable substantive information to both countries and

~~It is~~ provide information which would be of universal interest. The only problem might be the advanced US instruments which could give the Soviets strategic ~~for~~ technology, as cited in paragraph 4. above.

6. Proposal V - Use of Synchrotron Radiation for X-ray Photo-electron Spectroscopy. This very basic exchange would result in benefits to both countries. By performing coordinated research using the very expensive facilities involved, further insight into the characteristics of catalysts would be obtained. The degree of interest in this exchange would be great in view of the

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economic situation with regard to such expensive equipment

in both countries.

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